

Appln. No.: 10/591,632
Amendment Dated April 8, 2010
Reply to Office Action of December 8, 2009

JMYT-370US

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously Presented) A method of manufacturing a catalysed ceramic wall-flow filter comprising a plurality of channels, which method comprising the steps of:
 - (a) reducing the pressure in a pore structure of the channel walls relative to the surrounding atmospheric pressure to provide evacuated channel walls,
 - (b) contacting a surface of the evacuated channel walls with a liquid containing at least one catalyst component or a precursor thereof, wherein the liquid permeates the pore structure of the evacuated channel walls,
 - (c) drying the filter containing the catalyst component or its precursor, and
 - (d) calcining the filter containing the catalyst component or its precursor,wherein reducing the pressure in the pore structure of the wall-flow filter occurs prior to contacting the surface of the evacuated channel walls with the liquid; and the plurality of channels in the wall-flow filter are plugged at an inlet end or an outlet end of the wall-flow filter.
2. (Previously Presented) A method according to claim 1, wherein steps (b) and (c) are repeated at least once prior to step (d).
3. (Previously Presented) A method according to claim 1, wherein the pressure reduction in the pore structure of the channel walls is maintained during the liquid contacting step.
4. (Previously Presented) A method according to claim 1, wherein the liquid contains the precursor and comprises an aqueous solution of at least one metal salt.
5. (Previously Presented) A method according to claim 1, wherein the liquid containing at least one catalyst component comprises a slurry of at least one particulate metal oxide material in a carrier medium.

6. (Previously Presented) A method according to claim 5, wherein the at least one particulate metal oxide material has a D50 in the range 1-20, μm .
7. (Previously Presented) A method according to claim 1, wherein the liquid containing the at least one catalyst component comprises a sol of at least one metal oxide material in a carrier medium.
8. (Previously Presented) A method according to claim 7, wherein the sol particles have a D50 in the range 10-500 nm.
9. (Canceled)
10. (Previously Presented) A method according to claim 1, wherein the at least one catalyst component is loaded in the catalysed ceramic wall-flow filter in an amount from 20-120g/litre.
11. - 14. (Canceled)
15. (Previously Presented) A method according to claim 1, wherein the ceramic filter is made from a material selected from the group consisting of silicon, silicon carbide, aluminium nitride, silicon nitride, aluminium titanate, alumina, cordierite, mullite, pollucite and a thermet.
16. (Previously Presented) A method according to claim 1, wherein the filter has a porosity of 40-60%, prior to use.
17. (Canceled)
18. (Previously Presented) Apparatus for use in manufacturing a catalysed ceramic wall-flow filter having filter walls, wherein said filter walls define a plurality of channels and have a pore structure, the plurality of channels in the wall-flow filter are plugged at an inlet end or an outlet end of the wall-flow filter, said apparatus comprising means for sealingly isolating the plurality of channels of the ceramic wall-flow filter from the surrounding atmosphere, means for reducing pressure in the isolated channels to below the surrounding atmospheric pressure thereby to establish a vacuum in the pore structure of the filter walls to provide isolated and evacuated channels, at least one reservoir for

holding a liquid containing at least one catalyst component or a precursor thereof and means for dosing the isolated and evacuated channels with a pre-determined quantity of the liquid.

19. (Cancelled)
20. (Cancelled)
21. (Previously Presented) An apparatus according to claim 18 wherein the apparatus is at least semi-automated to control both the means for reducing pressure in the isolated channels and the means for dosing the liquid.
22. (Previously Presented) A method according to claim 5, wherein the carrier medium comprises water.
23. (Previously Presented) A method according to claim 7, wherein the carrier medium comprises water.
24. (Previously Presented) A method according to claim 15, wherein the material from which the ceramic filter is made is the thermet, wherein the thermet is selected from the group consisting of $\text{Al}_2\text{O}_3/\text{Fe}$, $\text{Al}_2\text{O}_3/\text{Ni}$ and $\text{B}_4\text{C}/\text{Fe}$.